devices to be developed as part of the robust growth of UWB technologies. The Commission specifically discussed the possibilities of future UWB medical technologies in its *2000 UWB Notice of Proposed Rulemaking*, stating that "[p]otential medical uses include the development of . . . heart monitors that act like an electrocardiogram except that they measure the heart's actual contractions instead of its electrical impulses."[41] The Commission anticipated that medical device manufacturers would attempt to incorporate UWB technologies into their devices like Kyma has done with the uCor Device.

Despite Commission efforts to establish a regulatory pathway for the introduction of UWB medical imaging devices, these new technologies have not been developed. Indeed, no medical imaging devices incorporating UWB technologies have been approved by the Commission under its Part 2 equipment authorization rules since the UWB rules were adopted in 2002. This suggests that the current rules for medical imaging may be preventing the development of UWB applications in the medical field.

B. The Commission Adopted 3.1 GHz as the Lower End of the Frequency Band for UWB Medical Imaging Devices to Address Potential (but Uncorroborated) Interference Concerns.

The Commission adopted 3.1 GHz as the lower frequency limit for medical imaging devices based on its admittedly limited understanding of how UWB might affect incumbent spectrum operators.[42] The Commission restricted the operating range of UWB medical imaging devices based on its

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[41] *In re Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems,* Notice of Proposed Rulemaking, ET Docket No. 98-153 (May 11, 2000) ("*2000 UWB NPRM*").

[42] *2002 UWB First Report and Order* at ¶ 21.

perception that UWB medical imaging technology could operate safely and effectively above 3.1 GHz. Indeed, the Commission said that it did "not appear that any hardship would result from the existing operating restrictions [*i.e.*, setting the floor for UWB operations at 3.1 GHz] for medical imaging systems."[43] The Commission noted further that it was "not aware of any existing UWB surveillance, medical imaging, or through-wall imaging systems for which the current rules would have an adverse impact. These systems are relatively new products, and we therefore believe that their operation should be limited until more experience has been obtained."[44] All of these observations were speculative, however, because no manufacturers of such UWB devices stepped forward to identify the potential hardships created by prohibiting UWB medical imaging devices from operating below 3.1 GHz.

As the Commission developed its UWB rules, it acknowledged that the most heavily occupied region of the spectrum was below 2 GHz, and that any UWB operations in this spectrum must not interfere with incumbent spectrum users, including public safety operations. Even at a lower frequency limit of 2 GHz, the Commission's apprehensions involved ***potential*** (yet uncorroborated) interference and congestion.[45] For example, the Commission was particularly concerned about the impact of potentially harmful interference in the GPS bands at 960 -1215

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[43] *In the Matter of Revision of Part 15 of the Commission's Rule re Ultra-Wideband Transmission Systems*, ET Docket No. 98-153 (Jul. 12, 2002) at ¶ 10.

[44] *In the Matter of Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems,* Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, ET Docket 98-153, FCC 03-333, 18 FCC Rcd 3857 at ¶ 29 ("*2003 UWB Opinion, Order and FNPRM*").

[45] *2002 UWB First Report and Order* at ¶ 34.

MHz and 1559-1610 MHz and the potential impact on public safety, business, and consumers.[46] Kyma understands that potential interference concerns are a legitimate issue that the Commission must consider. However, the stringent technical requirements imposed on UWB operation including the emission limits, are more than sufficient to address any interference concerns.

The Commission looked to the National Telecommunications and Information Administration ("NTIA") for input on its proposed UWB rules given the numerous Federal government spectrum users potentially impacted by UWB operations. Like the Commission, NTIA wanted to proceed cautiously and admittedly adopted conservative constraints. Specifically, NTIA asserted that it:

> has concluded that UWB systems can operate in the spectrum between 0 and 31 GHz as long as the constraints shown in Attachment 3 [which is titled "Summary of UWB EIRP Limits (dBm/MHz at antenna output) & Use Constraints"] are adopted. These constraints have been coordinated with the FCC and the major Federal agencies. While these constraints may appear conservative, we believe they reflect the FCC's and NTIA's desire to proceed cautiously in order to protect the incumbent spectrum users, especially those that are providing safety-of-life services, and yet provide spectrum to continue development of the UWB technology.[47]

The Commission's approach in setting the lower frequency limit was based on general concerns about interference and congestion in the spectrum below 3.1 GHz. The initial UWB rules reflected the one-sided view of incumbent spectrum users who simply did not want others operating in their allocated spectrum regardless of whether there was any actual harmful interference.[48] The

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[46] *Id.*

[47] Letter from William T. Hatch, Associate Administrator, Office of Spectrum Management, U.S. Department of Commerce to Edmond J. Thomas, Chief, Office of Engineering and Technology, FCC (February 13, 2002).

[48] The Commission noted in the *2002 UWB First Report and Order* at ¶ 190 that: "While we believe that some of the interference levels characterized by the commenters may not represent

Commission did not take into account the future impacts on medical imaging technology in setting the lower frequency limit, though the Commission acknowledged that this was just the starting point for the development of UWB technical and operational requirements.

C. The Commission has Imposed Less Stringent Minimum Threshold Requirements on UWB Non-Medical Imaging Devices, Thereby Showing Flexibility and Allowing Operation of such Devices below 3.1 GHz.

The Commission has shown a willingness to impose less stringent and/or lower frequency limits (or modify existing limits) for certain types of UWB imaging devices – such as surveillance systems, GPR, wall imaging and through-wall imaging -- once the Commission was satisfied that (i) the operation of such devices would not interfere with incumbent public safety operations, among others, and (ii) there was an actual need for such UWB operations in those lower frequency bands.

First, the Commission set a lower minimum frequency threshold of 1.99 GHz in 2002 for UWB surveillance imaging devices rather than the 3.1 GHz adopted for other UWB imaging devices.[49] These surveillance systems (which are for use only by law enforcement, fire and rescue organization, certain public utilities, and certain industrial entities) were permitted to operate below 3.1 GHz with higher unwanted emission limits (and greater risk of harmful interference) than other classes of UWB devices because of the substantial benefits to public safety and the

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real-world situations, we agree that the initial UWB regulations should be implemented cautiously."

[49] *2002 UWB First Report and Order* at ¶ 21.

limited user base.[50] In addition, as previously noted, the Commission granted the *UltraVision Waiver* for a UWB surveillance system operating at frequencies -- between 80 and 600 MHz – well below the lower frequency limited set forth in its rules for such UWB systems. The Commission found that the benefits of the surveillance system to protect property outweighed the potential risk of harmful interference, and the existing rules included sufficient operational and technical requirements to manage any such potential risk.

Second, the Commission stated with respect to UWB GPR:

> We observe that GPRs must operate at frequencies in the region below 2 GHz in order to obtain the penetration depth and resolution necessary to detect and obtain the images of buried objects. GPRs can neither avoid nor notch out the restricted frequency bands. We believe the risk of interference from GPRs is negligible because the overwhelming majority of their energy is directed into the ground where most of the energy is absorbed.[51]

In spite of the minimal risks, the Commission initially prohibited UWB GPR operations between 960 MHz and 3.1 GHz. However, the Commission reconsidered this decision in 2003 because there was no evidence suggesting that UWB GPRs present any threat of interference after testing by NTIA, the U.S. Department of Transportation, Stanford University and others.[52] With the small number of GPR devices, a demonstrated need for GPRs to operate at frequencies between 960 MHz and 3.1 GHz to perform their required functions, and little threat of interference, the Commission amended the UWB rules to permit GPRs to operate at any frequency below 10.6 GHz

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[50] *Id.* at ¶55.

[51] *2000 UWB NPRM* at ¶ 25.

[52] *2003 UWB Opinion, Order and FNPRM* at ¶ 34.

as long as emissions comply with applicable limits.[53] The Commission adopted a similar amendment for wall imaging systems, as there are "essentially no technical differences between these products."[54]

Third, like UWB GPR and wall imaging systems, the Commission permitted UWB through-wall imaging devices to operate below 960 MHz and between 1.99 GHz and 10.6 GHz. Again, this shows the Commission's flexibility to adopt lower frequency limits for other UWB imaging devices. Moreover, in response to a request for reconsideration of the *2002 UWB First Report and Order* by Time Domain Corporation, the Commission revised its emission limits for through-wall imaging devices to accommodate a Time Domain device under development.[55] By doing so, the Commission demonstrated its flexibility with respect to UWB technical and operational requirements. The Commission explained that the potential for using UWB through-wall imaging devices to save the lives of firefighters, emergency rescue personnel and law enforcement officers and to assist in saving the lives of the public outweighs the low risk that wall-imaging devices

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[53] *Id.* at ¶ 35.

[54] *Id.*

[55] *See Time Domain Corporation Petition for Reconsideration of Revision of Part 15 of the FCC's Rules Regarding Ultra-wideband Transmission Systems* ("*Time Domain Petition*"), dated June 17, 2002, ET Docket No. 98-153. Time Domain was not asking the Commission to modify the minimum frequency limit for UWB through-wall imaging devices. Rather, Time Domain sought a modification to the permitted emission limits below 1990 MHz. Specifically, Time Domain said, "There are some genuine physical constraints that impair the ability of such a device to function if the UWB bandwidth [*i.e.*, the -10dB bandwidth] must be contained within 1,990 – 10,600 MHz. First, the limit in Section 15.511 has the effect of requiring that the nominal center frequency to be located at 3 GHz or above so that by the time the UWB pulse falls off in amplitude, the signal will be down 10 dB at 1,990 GHz."

pose.[56] Specifically, the Commission explained that the through-wall imaging devices may cause interference to GPS receivers under the worst possible scenarios, but this would impact receivers within a few meters of the UWB device.[57] The Commission explained that "[w]hile we are continuing to follow a conservative approach in the implementation of standards for UWB operations, we believe that the safety-of-life applications of this UWB equipment, combined with the limitation that operation must be by licensed public safety radio operators who can temper any possible adverse equipment interactions, justify the adoption of Time Domain's proposal."[58]

In summary, the Commission initially took a conservative approach with its UWB requirements, but also recognized that the 3.1 GHz band minimum is not appropriate for many UWB technologies. The Commission anticipated that these band restrictions (and other technical requirements) might ultimately impact the development of new technology. [59] With additional insight into and experience with UWB devices, the Commission has adjusted the rules for GPRs, wall imaging, and through-wall imaging devices in order to "realize the full benefits of this technology" as shown by the above examples.[60] The Commission should now do the same for the uCor Device.

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[56] *Id.*

[57] *Id.*

[58] *Id.*

[59] *2003 UWB Opinion, Order and FNPRM* at ¶ 29.

[60] *See Id. See also* 47 C.F.R. §§ 15.510(a), 15.511(a) and *2000 UWB NPRM* at ¶ 27.

D. Kyma's Medical Imaging Device should also be Permitted to Operate below 3.1 GHz because such Operations do not Raise Interference or Safety Risks.

The uCor Device will not cause harmful interference or safety risks to other spectrum users. The uCor Device will operate between 530 MHz and 2.105 GHz, and will meet the technical limits applicable to UWB medical imaging technologies including emission limitations as demonstrated in the test report attached as Exhibit A. It operates at approximately .1mW of power and it has sophisticated scheduling algorithms to preserve energy and avoid unnecessary emissions. The emissions are directed into the patient's body (which will typically be located indoors, in a reclined state), on a low duty cycle of 6 to 8 transmissions per day for up to a minute each time.

The Commission has recognized that these factors reduce the likelihood of harmful interference when it stated: "We anticipate that the walls, buildings or other objects against which the imaging system may be placed may absorb most of the energy. Similarly, we believe that medical imaging systems would be used indoors such that intervening walls would attenuate the emissions." [61] Thus, for the uCor Device, emissions are limited at least two-fold – by the patient's body and by the surrounding facility. Additionally, as required under 47 C.F.R. § 15.513(b), the uCor Device will be used under the supervision of a licensed health care provider in accordance with Commission rules – an additional feature that also greatly reduces any threat of harmful interference.

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[61] *2002 UWB First Report and Order* at ¶ 189 and footnote 280.

E. Relaxing the Restraints of UWB Rules is Consistent with FCC's Previous Statements on UWB Operations.

The Commission always intended to revisit its approach to adopting regulations for UWB. Thus, granting this waiver to allow the uCor Device to operate below 3.1 GHz is consistent with the Commission's previously-stated intentions. As noted, the Commission started with an "extremely conservative" standard in the UWB requirements based on the limited information and technology available in 2002.[62] The Commission reasoned that "[t]hese systems are relatively new products, and we therefore believe that their operation should be limited until more experience has been obtained."[63] The Commission was reluctant to add flexibility or consider changes to the technical parameters "until it [had] more experience with UWB devices," as any changes to the rules at an early stage "would be disruptive to current industry product development efforts."[64] But because "initial restrictions on applications, operating frequencies and emission levels may limit some UWB applications," the Commission was open to reevaluating these standards "in the future as [it] continue[s] to collect data regarding UWB operations."[65]

Here, Kyma is asking the Commission to do exactly as it intended and review (and reconsider) the extremely conservative standards in its UWB rules based on the development of the uCor medical imaging technology. The current band allocation for UWB medical imaging devices has not encouraged the development of new UWB technologies. Thus, Kyma requests that the

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[62] *2002 UWB First Report and Order* at ¶ 2.

[63] *Id.* at ¶ 21.

[64] *2003 UWB* Opinion, Order and FNPRM at ¶¶ 1 and 153.

[65] *2002 UWB First Report and Order* at ¶¶ 2 and 21.

Commission waive the lower frequency limit requirement of Section 15.513(a) for the uCor Device so that it can operate between 530 MHz and 2.105 GHz.

VI. Rule 15.525 should be Waived or Relaxed as it applies to Kyma's uCor Device.

Section 15.525 of the Commission's rules requires coordination of imaging systems through the Commission (which, in turn, coordinates this information with NTIA) before usage. The coordination requirement was incorporated into the original UWB rules as an additional means of protecting incumbent federal government spectrum users from the potential (though unproven) harmful interference that new UWB technologies ***might*** cause by requiring users to identify where the device was being used to aid in identifying the source of potential interference. However, the uCor Device creates such little threat of interference that the rule should be waived. Indeed, application of the coordination requirement to the uCor Device – which is a patient-worn device that is operated intermittently, primarily, indoors -- is neither practical nor necessary given the extremely low risk of harmful interference to other spectrum users.[66]

The Commission adopted the coordination requirement for imaging devices in response to NTIA's request to protect potentially affected federal government users that are providing safety-of-life

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[66] In the *UltraVision Waiver Order,* the Commission declined to waive the Section 15.525 coordination requirement for the subject surveillance system. However, the UltraVision system was a fixed system where the subject devices were to be located outside the perimeter of the sites to be protected. *UltraVision Waiver Order* at ¶ 5. This configuration poses a greater interference risk than the mobile uCor Device which is typically used indoors.

services.[67] However, as discussed herein, the possibility of the uCor Device creating harmful interference is remote since it may be used only by those patients under the care of a healthcare professional for serious medical purposes, it will generally be used indoors at the patient's home, it must be directed into the body, it must operate at a low power, and each patient will use the device only a few times a day for a short period of time. For these reasons, Kyma believes the Commission should waive the Section 15.525 coordination requirement here.

However, if the Commission does not grant Kyma a waiver from the coordination requirement, Kyma respectfully requests that the Commission apply a modified coordination system to the uCor Device which is similar to the system adopted for mobile devices where users are simply required to identify a geographic area of operation (*e.g.*, county(ies), state(s), nationwide). Kyma understands that the Commission previously assumed that medical imaging devices would be considered "fixed devices" that are operated at only one location for coordination purposes.[68] However, with the advent of new technology, medical imaging devices are smaller and may be mobile as is the case with the uCor Device. While still under the supervision of a healthcare professional, this pocket-sized technology may now be used in several counties or in several states by a patient to the extent the patient travels between his/her home, visiting family and friends, and other travel activities as permitted by his/her doctor.

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[67] *2002 UWB First Report and Order* at ¶ 19; William T. Hatch, Associate Administrator, Office of Spectrum Management, U.S. Department of Commerce to Edmond J. Thomas, Chief, Office of Engineering and Technology,
FCC (February 13, 2002).

[68] *2003 UWB Opinion, Order and FNPRM* at ¶ 31.

For the above reasons, Kyma requests that any coordination information for its medical imaging device that is required to be filed with the Commission simply identify a more general geographical area of operation (*e.g.*, county(ies), states, nationwide), rather than a specific geographical location or address as is required for "fixed devices."[69] Without this flexibility, consumers and health care professionals may be required to file coordination information repeatedly. This flexibility is essential to the consistent and reliable use of the Kyma technology.

VII. Conclusion.

Waivers of the UWB rules have been granted by the Commission to further national security, protect public safety, and enhance transportation infrastructure. The uCor Device also furthers an important public interest as it addresses life-threatening conditions facing CHF patients. With its early warning system for CHF patients, the uCor Device can reduce hospitalization rates and minimize or eliminate other healthcare costs associated with CHF treatment. Based on the foregoing, Kyma respectfully requests that the Commission grant this waiver request.

Respectfully submitted,

By: _____

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Counsel for Kyma Medical Technologies Ltd

[69] *See Id.*

EXHIBIT A

ISRAEL TESTING LABORATORIES
Global Certifications You Can Trust

DATE: 02 March 2015

I.T.L. (PRODUCT TESTING) LTD.
Preliminary Compliance Testing of UWB Medical Imaging Device Report

for

Kyma Medical Technological Ltd.

Equipment under test:

µCOR System Monitor

µCOR V3.0.0

Tested by: _____
I. Siboni

Approved by: _____
D. Shidlowsky

TABLE OF CONTENTS

1. General Information

1.1 Administrative Information

Manufacturer:	Kyma Medical Technological Ltd.
Manufacturer's Address:	Atir-Yeda Industry Park, 17 Atir-Yeda St., Kfar-Sava, 4464313, Israel
Manufacturer's Representative:	Moshik Mosesko Roman Vaistikh
Equipment Under Test (E.U.T):	µCOR System Monitor
Equipment Model No.:	µCOR V3.0.0
Equipment Serial No.:	Not Designated
Date of Receipt of E.U.T:	12.01.15
Start of Test:	12.01.15
End of Test:	15.02.15
Test Laboratory Location:	I.T.L (Product Testing) Ltd. 1 Batsheva St., Lod ISRAEL 7120101
Test Specifications:	47CFR15 Sections 15.209; 15.513

1.2 List of Accreditations

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. FCC Designation number: US1004
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) (Japan), Registration Numbers: C-3006, R-2729, T-1877, G-245.
5. Industry Canada (Canada), IC File No.: 46405-4025; Site No. IC 4025A-1.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

1.3 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.4 and ANSI C63.10.

1.4 Test Facility

The radiated emissions tests were performed at I.T.L.'s testing facility at Lod, Israel.
I.T.L.'s EMC Laboratory is also accredited by A2LA, certificate No. 1152.01.and the FCC Designation Number is US1004.

1.5 Measurement Uncertainty

Radiated Emission

Radiated Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4) for open site 30-1000MHz:

Expanded Uncertainty (95% Confidence, K=2):

± 4.98dB

Note: See ITL Procedure No. PM 198.

2. System Test Configuration

2.1 Justification

Testing was performed in accordance with correspondence between Kyma, Mr. Terry Mann, and the FCC.
The E.U.T. transmitter RF power setting (DCA (Power Control Values)) for each frequency is listed in the second column in the test results tables.
Testing was performed using a phantom jig per correspondence between Kyma, Mr. Terry Mann, and the FCC.

2.2 EUT Exercise Software

The following software was used:
Control software: "PatientServerApp"
Device: uC software

2.3 Special Accessories

No special accessories were needed to achieve compliance.

2.4 Equipment Modifications

No equipment modifications were needed to achieve compliance.

3. Test Set-up Photos

Figure 1. Radiated Emission Test

Figure 2. Radiated Emission Test

Figure 3. Radiated Emission Test

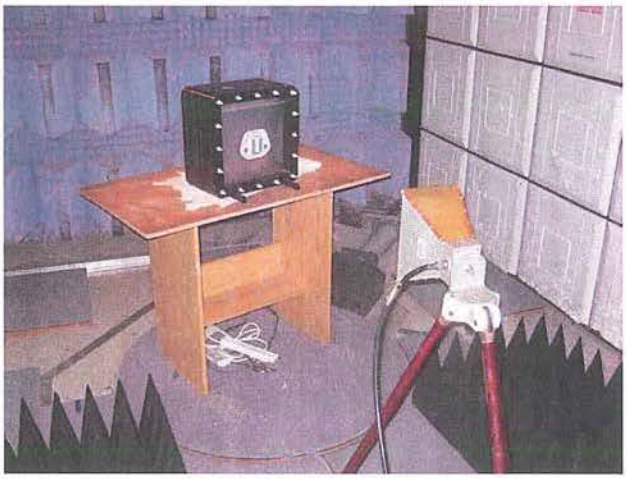

Figure 4. Radiated Emission Test

4. Radiated Emission, Below 960 MHz

4.1 Test Procedure

The E.U.T. transmitted in the frequency range of 530 - 960 MHz. The transmitter operated in "stepping" mode.

Testing on the OATS was performed on signals that were at least 10 dB above the OATS background noise level. Signals with lower signal to noise ratio were tested inside a fully anechoic room (FAR) as indicated in the test results table.

The E.U.T was placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground.

The frequency range 530 MHz - 960 MHz was scanned and the list of the highest emissions was verified and updated accordingly.

The emissions were measured using a computerized EMI receiver complying with CISPR 16 requirements.

The test distance was 3 meters.
The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.
Verification of the E.U.T emissions was based on the following methods: turning the E.U.T on and off; using a frequency span less than 10 MHz; observation of the signal level during turntable rotation. (Background noise is not affected by the rotation of the E.U.T.)
The above is based on correspondence between Kyma, Mr. Terry Mann, and the FCC.

4.2 Test Results

See Table 1.

Radiated Emission

E.U.T Description µCOR System Monitor
Model Number µCOR V3.0.0
Part Number: Not Designated

Frequency (MHz)	Tx Setting (DCA Value) (dB)	Peak (dBµV/m)	QP (dBµV/m)	QP Limit (dBµV/m)	AVG (dBµV/m)
530	12	47.2	44.3	46.0	23.6
555	12	47.2	44.0	46.0	23.9
580	12	48.6	45.4	46.0	24.1
605	14	48.2	45.2	46.0	24.6
630	15	48.0	44.3	46.0	25.2
655	16	50.0	44.7	46.0	25.7
680	15	48.0	43.6	46.0	26.2
705	14	48.0	43.1	46.0	26.8
730	14	48.3	44.4	46.0	27.5
755	12	49.3	45.5	46.0	27.3
780	14	48.8	44.1	46.0	27.4
805	17	51.6	44.3	46.0	27.8
830	15	50.0	44.8	46.0	28.3
905	17	50.0	44.4	46.0	29.6
855*	18	52.7	45.0	46.0	32.7
880*	19	51.2	46.0	46.0	31.6
930*	22	53.3	45.2	46.0	32.7
955*	22	51.3	43.6	46.0	32.6

* These frequencies were tested inside the FAR.

Table 1 Radiated Emission Below 960 MHz

5. Radiated Emission, Above 960 MHz

5.1 Test Procedure

The E.U.T. transmitted in the frequency range of 960 - 2105 MHz. The transmitter operated in "stepping" mode.

The E.U.T was placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground plane.

The frequency range 960 MHz-2105 MHz was scanned and the list of the highest emissions was verified and updated accordingly.

The emissions were measured using a computerized EMI receiver complying with CISPR 16 requirements.

The test distance was 1 or 3 meters.
The readings were maximized by adjusting the turntable azimuth between 0-360°, and the antenna polarization.
Antenna height was 1-4 meters for test distance of 3 meters on the OATS, 1-2 meters for distance of 1 meter on the OATS, and 1 meter for 1 meter test distance and 1-2 meters for 3 meter test distance in the FAR.
Verification of the E.U.T emissions was based on the following methods: turning the E.U.T on and off; using a frequency span less than 10 MHz; observation of the signal level during turntable rotation. (Background noise is not affected by the rotation of the E.U.T.)
Signals in the cellular bands were tested inside a fully anechoic room (FAR) as indicated in Table 5.
Notes:

A. A distance of 1 meter was also used in order to improve signal/noise ratio.
B. The limits for EIRP (Avg (1 kHz RBW) and EIRP RMS used in Table 2 to Table 4 for a test distance of 1 meter, were adjusted (increased) by a factor of 20 log 3/1 = 9.5 dB.
C. Explanation for Peak Limit per 47CFR15.513(f)
   C.1. The bandwidth occupied by each E.U.T. operation frequency is up to 1 MHz (See Figure 5).
   C.2. Therefore using the limit correction factor of 20 log RBW/50 is incorrect, in this case, since this is based on a bandwidth of up to 500 kHz.
   C.3. The above is supported by example results using 10 MHz and 1 MHz bandwidths, showing a difference of up to 3.7 instead of (20 log 10/50) – (20 log 1/50) = 20 dB.
   C.4. As a reasonable trade-off, a correction factor of (20 log 5/50) = - 20 dB (considering signal bandwidth of 5 MHz) is used and the adjusted limit used is 0 – 20 = - 20 dBm EIRP. (See Figure 6 to Figure 9).

5.2 Test Results

See Table 2 to Table 5.

Radiated Emission

E.U.T Description μCOR System Monitor
Type μCOR V3.0.0
Serial Number: Not Designated

Frequency	Tx Setting (DCA Value)	Peak	Peak (1kHz RBW)	EIRP (Peak)	EIRP Peak Limit	AVG	AVG (1kHz RBW)	EIRP (AVG 1kHz RBW)	EIRP (AVG 1kHz RBW) Limit	RMS	EIRP RMS	EIRP RMS Limit
MHz	(dB)	dBuV/m	dBuV/m	dBm	dBm	dBuV/m	dBuV/m	dBM	dBm	dBuV/m	dBm	dBm
980*	14	56.4	N.A.	-39.6	-20	22.6	N.A.	N.A.	N.A.	27.6	-68.4	-65.3
1005	14	65.2	N.A.	-30.8	-10	29.5	N.A.	N.A.	N.A.	34.2	-61.8	-55.8
1030	14	66.7	N.A.	-29.3	-10	29.9	N.A.	N.A.	N.A.	35.7	-60.3	-55.8
1055	14	65.4	N.A.	-30.8	-10	29.7	N.A.	N.A.	N.A.	34.4	-61.8	-55.8
1080	14	66.9	N.A.	-29.3	-10	30.1	N.A.	N.A.	N.A.	35.4	-60.8	-55.8
1105	14	66.2	N.A.	-30.0	-10	30.1	N.A.	N.A.	N.A.	34.6	-61.6	-55.8
1130	14	66.7	N.A.	-29.45	-10	30.4	N.A.	N.A.	N.A.	35.0	-61.2	-55.8
1155	14	68.7	26.9	-27.4	-10	30.4	N.A.	N.A.	N.A.	35.7	-60.4	-55.8
1180	14	69.5	25.6	-26.6	-10	30.5	2.6	-93.5	-65.8	35.6	-60.5	-55.8
1205	14	70.9	22.7	-25.2	-10	30.5	2.1	-94.0	-65.8	36.2	-59.8	-55.8
1230	14	70.2	N.A.	-25.9	-10	30.3	1.9	-94.2	-65.8	35.3	-60.8	-55.8
1255	14	70.6	22.0	-25.3	-10	30.7	N.A.	N.A.	N.A.	35.4	-60.5	-55.8
1280	10	70.6	22.2	-25.3	-10	31.2	N.A.	N.A.	N.A.	38.1	-57.8	-55.8
1305	10	69.4	N.A.	-26.5	-10	31.1	N.A.	N.A.	N.A.	37.8	-58.1	-55.8
1330	10	68.7	N.A.	-27.2	-10	31.2	N.A.	N.A.	N.A.	37.7	-58.2	-55.8

Table 2 Radiated Emission, Tested on OATS, 1 meter distance

* Testing at this frequency was performed at a distance of 3 meters.

Radiated Emission

E.U.T Description μCOR System Monitor
Type μCOR V3.0.0
Serial Number: Not Designated

Frequency	Tx Setting (DCA Value)	Peak	Peak (1kHz RBW)	EIRP (Peak)	EIRP Peak Limit	AVG	AVG (1kHz RBW)	EIRP (AVG 1kHz RBW)	EIRP (AVG 1kHz RBW) Limit	RMS	EIRP RMS	EIRP RMS Limit
MHz	(dB)	dBuV/m	dBuV/m	dBm	dBm	dBuV/m	dBuV/m	dBM	dBm	dBuV/m	dBm	dBm
1355	10	68.4	N.A.	-27.6	-10	31.6	N.A.	N.A.	N.A.	38.4	-57.6	-55.8
1380	10	69.1	N.A.	-26.9	-10	31.9	N.A.	N.A.	N.A	39.2	-56.75	-55.8
1405	10	68.0	N.A.	-28.0	-10	32.1	N.A.	N.A.	N.A	38.7	-56.75	-55.8
1430	10	68.2	N.A.	-27.8	-10	32.3	N.A.	N.A.	N.A	39	-56.95	-55.8
1455	10	66.3	N.A.	-29.8	-10	32.3	N.A.	N.A.	N.A	38.1	-57.95	-55.8
1480	10	67.8	N.A.	-28.3	-10	32.7	N.A.	N.A.	N.A	38.2	-57.85	-55.8
1505	10	66.7	N.A.	-29.4	-10	33	N.A.	N.A.	N.A	38.6	-57.45	-55.8
1530	10	67..5	N.A.	-28.6	-10	33.3	N.A.	N.A.	N.A	39	-57.05	-55.8
1555	10	68.6	N.A.	-26.7	-10	33.5	N.A.	N.A.	N.A	39.5	-55.86	-55.8
1580	14	69.9	21.3	-25.4	-10	33.7	5.8	-89.5	-65.8	38	-57.26	-55.8
1605	14	68.6	N.A.	-26.7	-10	34.1	6.2	-89.1	-65.8	37.9	-57.36	-55.8
1630*	3	66.7	N.A.	-28.6	-20	34.9	N.A.	N.A.	N.A	41.2	-54.1	-53.3
1655*	3	67.8	N.A.	-28.1	-20	35.1	N.A.	N.A.	N.A	41.7	-54.2	-53.3
1680*	3	66.8	N.A.	-29.1	-20	35	N.A.	N.A.	N.A	41.4	-54.5	-53.3
1705*	3	68.2	N.A.	-27.7	-20	35.4	N.A.	N.A.	N.A	41.9	-54.0	-53.3

Table 3 Radiated Emission, Tested on OATS, 1 meter distance

* Testing at these frequencies was performed at a distance of 3 meters.

Radiated Emission

E.U.T Description µCOR System Monitor
Type µCOR V3.0.0
Serial Number: Not Designated

Frequency	Tx Setting (DCA Value)	Peak	Peak (1kHz RBW)	EIRP (Peak)	EIRP Peak Limit	AVG	AVG (1kHz RBW)	EIRP (AVG 1kHz RBW)	EIRP (AVG 1kHz RBW) Limit	RMS	EIRP RMS	EIRP RMS Limit
MHz	(dB)	dBuV/m	dBuV/m	dBm	dBm	dBuV/m	dBuV/m	dBM	dBm	dBuV/m	dBm	dBm
1730	3	74.1	N.A.	-21.8	-10	45.5	N.A.	N.A	N.A.	49.9	-45.95	-43.8
1755	3	73.2	N.A.	-21.5	-10	45.8	N.A.	N.A	N.A.	49.4	-45.32	-43.8
1780	3	74.6	N.A.	-20.1	-10	46.1	N.A.	N.A	N.A.	50.6	-44.12	-43.8
1855	3	75.3	N.A.	-19.8	-10	46.4	N.A.	N.A	N.A.	50.7	-44.42	-43.8
1930	3	75.0	N.A.	-20.1	-10	46.6	N.A.	N.A	N.A.	50.8	-44.32	-43.8
1955*	3	68.2	N.A.	-29.5	-20	37.15	N.A.	N.A	N.A.	42.5	-55.2	-53.3
1980*	3	67.0	N.A.	-30.7	-20	37.6	N.A.	N.A	N.A.	42.3	-55.4	-53.3
2005*	1	69.2	N.A.	-28.5	-20	37.9	N.A.	N.A	N.A.	44.1	-53.6	-51.3
2030*	1	68.1	N.A.	-29.6	-20	37.5	N.A.	N.A	N.A.	43.2	-54.5	-51.3
2055*	1	66.4	N.A.	-31.6	-20	37	N.A.	N.A	N.A.	42.0	-56.0	-51.3
2080*	1	65.4	N.A.	-32.6	-20	36.9	N.A.	N.A	N.A.	41.2	-56.8	-51.3
2105*	1	54.9	N.A.	-43.1	-20	37.1	N.A.	N.A	N.A.	40.9	-57.1	-51.3

Table 4 Radiated Emission, Tested on OATS, 1 meter distance

* Testing at these frequencies was performed at a distance of 3 meters.

Radiated Emission

E.U.T Description µCOR System Monitor
Type µCOR V3.0.0
Serial Number: Not Designated

Frequency	Tx Setting (DCA Value)	Peak	Peak (1kHz RBW)	EIRP (Peak)	EIRP Peak Limit	AVG	AVG (1kHz RBW)	EIRP (AVG 1kHz RBW)	EIRP (AVG 1kHz RBW) Limit	RMS	EIRP RMS	EIRP RMS Limit
MHz	(dB)	dBuV/m	dBuV/m	dBm	dBm	dBuV/m	dBuV/m	dBM	dBm	dBuV/m	dBm	dBm
1805	3	68.6	N.A.	-26.12	-20	36.1	N.A.	N.A	N.A.	38.0	-56.72	-53.3
1830	3	69.2	N.A.	-25.52	-20	36.5	N.A.	N.A	N.A.	38.3	-56.42	-53.3
1880	3	69.0	N.A.	-26.12	-20	36.5	N.A.	N.A	N.A.	38.5	-56.62	-53.3
1905	3	67.8	N.A.	-27.32	-20	38.3	N.A.	N.A	N.A.	38.4	-56.72	-53.3

Table 5 Radiated Emission, Tested in FAR

Radiated Emission

E.U.T Description	µCOR System Monitor
Model Number	µCOR V3.0.0
Part Number:	Not Designated

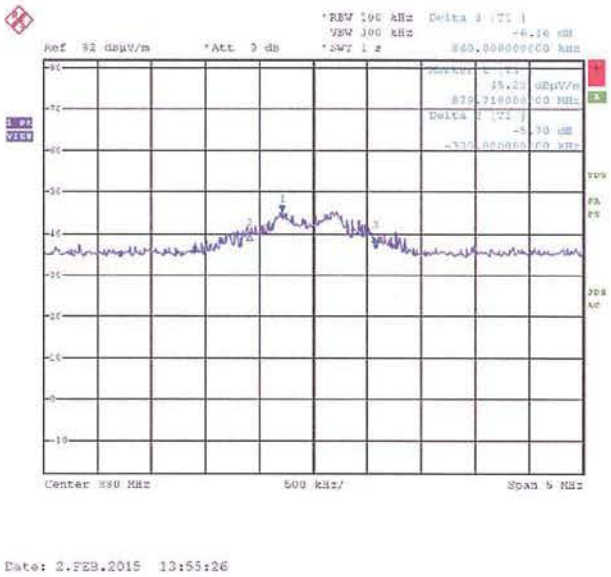

Figure 5. Bandwidth 100 kHz

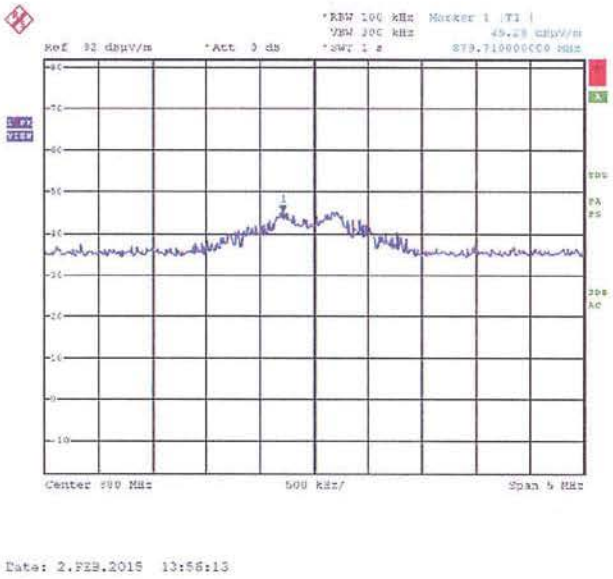

Figure 6. Power 100 kHz

Radiated Emission

E.U.T Description	µCOR System Monitor
Model Number	µCOR V3.0.0
Part Number:	Not Designated

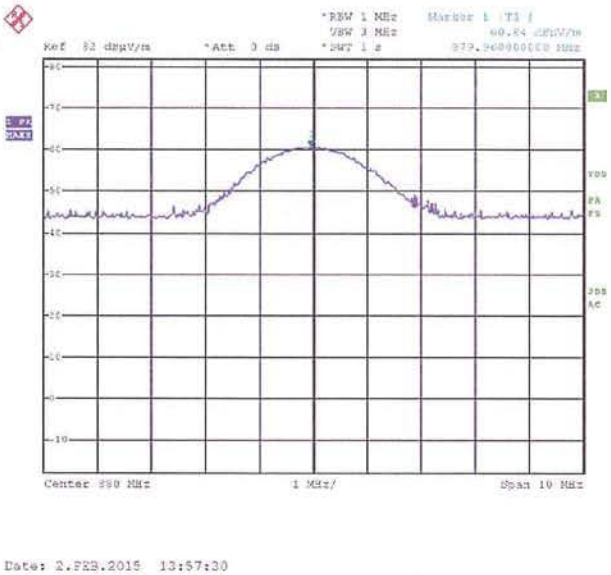

Figure 7. Power 1 MHz

Figure 8. Power 3 MHz

Radiated Emission

E.U.T Description	µCOR System Monitor
Model Number	µCOR V3.0.0
Part Number:	Not Designated

Figure 9. Power 10 MHz